

**REMARKS**

By this amendment, claims 1 and 8-10 are amended. Thus, claims 1-12 are all the claims pending in the application. Applicant respectfully requests withdrawal of the objections and rejections, and allowance of the claims, in view of the foregoing amendments and following Remarks.

**I. Formalities**

The Examiner acknowledges foreign priority under 35 U.S.C. § 119, with a priority date of March 4, 1999 and a 35 U.S.C. § 102(e) date of October 11, 2000. Applicant thanks the Examiner for acknowledgement of foreign priority.

Additionally, the Examiner has considered the referenced submitted in the Information Disclosure Statement filed on October 11, 2000. Applicant thanks the Examiner for consideration of the references, and for providing Applicant with an initiated copy of Form PTO-1449.

**II. Allowable subject matter**

The Examiner indicates that claims 10 and 12 are allowable, and would be allowable if amended to overcome the §112 rejection (claim 10) and rewritten in independent form (claims 10 and 12). Applicant thanks the Examiner for the indication of allowable subject matter. As shown in the foregoing amendments, claim 10 has been amended to overcome the §112 rejection. However, Applicant respectfully declines to rewrite the claims in independent form at this time, because Applicant respectfully submits that the independent claims from which claims 10 and 12 depend are allowable for at least the reasons described in greater detail below.

### **III. Objections**

The Examiner objects to the specification due to allegedly improper language in the abstract. As shown in the foregoing amendments, Applicant has provided a substitute Abstract that overcomes the Examiner's objections to the Abstract. Thus, Applicant respectfully requests withdrawal of the objection to the Abstract.

### **IV. Claims 1-10 are in proper condition under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph**

Claims 1-10 stand rejected under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph due to alleged indefiniteness. More specifically, claims 1 and 8-10 stand rejected due to various specific instances of indefiniteness. As shown in the foregoing amendments, Applicant has amended the claims to overcome the alleged rejections. Thus, Applicant respectfully requests withdrawal of the §112, 2<sup>nd</sup> paragraph rejections.

### **V. Claims 1, 2, 5, 8 and 11 are novel**

Claims 1, 2, 5, 8 and 11 stand rejected as being anticipated under 35 U.S.C. § 102 over Castelli et al. (U.S. Patent No. 4,342,880, hereafter "Castelli"). Applicant respectfully submits that Castelli fails to disclose all of the features recited in the rejected claims as required for an anticipation rejection under §102. Thus, Applicant respectfully requests withdrawal of the rejection and allowance of the claims.

The present invention relates to a power cable having improved characteristics at least due to the presence of at least one covering layer into which a nanocomposite component that can be used in industrial fabrication processes is introduced or polymerized *in situ*. For additional detail on the nanocomposite component, Applicant refers the Examiner to page 1, line 30-page 2, line 4 of WO-A-93/04 117.

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In the present application, claim 1 recites a power cable comprising a conductive material core and at least one covering layer, characterized in that said at least one covering layer is constituted essentially of a material comprising an inorganic compound having an exfoliated layered structure and an organic compound inserted between layers of said inorganic compound.

Castelli discloses a medium voltage electric cable having one or more conductors covered by an inner semiconductive screen 12, an insulation layer 13 and an outer semiconductive screen. Applicant respectfully submits that the foregoing structure of Castelli is a conventional structure for a medium voltage cable.

Applicant respectfully submits that Castelli fails to disclose an exfoliated layered structure, as recited in claim 1. Castelli uses a combination of vulcanization and extrusion to form the semiconductor screen and insulation portions of the cable. Castelli does not disclose an inorganic compound having an exfoliated layered structure, as recited in claim 1.

Further, Applicant respectfully submits that Castelli fails to disclose that the inorganic compound is rendered incompatible with the organic compound via treatment with an agent, as recited in independent claim 11. Applicant notes that the outer semiconductor screen 14 of Castelli includes a blend of nitrile rubber and ethylene-propylene rubber, and thus, the semiconductor screen 14 is not an inorganic compound that is rendered incompatible with an organic compound. In fact, Castelli appears to have the same compound in layers 13 and 14, which the Examiner has applied to claim 11. Thus, Applicant respectfully submits that the rejection of claim 11 is based on an improper characterization of Castelli.

Claims 2, 5 and 8 depend from claim 1. Applicant respectfully submits that the dependent claims are allowable for at least the same reasons as discussed with respect to independent claim

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1. Additionally, Applicant respectfully submits that Castelli fails to disclose that the at least one covering layer comprises an insulative material layer constituted essentially of a material comprising an inorganic compound **having an exfoliated layered structure** and an organic compound inserted between the layers of said inorganic compound, as recited in claim 8. Thus, Applicant respectfully requests withdrawal of the §102 rejection.

**VI. Claims 3, 4, 6, 7 and 9 would not have been obvious**

Claims 3, 4, 6, 7 and 9 stand rejected due to alleged obviousness under 35 U.S.C. § 103(a) over Castelli. Applicant respectfully submits that the Examiner's proposed modification of Castelli fails to disclose or suggest all of the claimed combination of features recited in the claims rejected under §103. Thus, Applicant respectfully requests withdrawal of the rejection and allowance of the claims.

Claims 3, 4, 6, 7 and 9 depend from independent claim 1. Applicant respectfully submits that those dependent claims are allowable for at least the same reasons as discussed above with respect to the rejected dependent claims. Thus, Applicant respectfully requests withdrawal of the rejection and allowance of the claims for at least that reason, as well as the additional reasons provided below.

In addition to the foregoing reasons, Applicant respectfully submits that Castelli fails to teach or suggest that the at least one covering layer comprises an external covering layer constituted essentially of a material comprising an inorganic compound **having an exfoliated layered structure** and an organic compound inserted between the layers of said inorganic compound, as recited in claim 9.

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**VII. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

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**APPENDIX**

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

**The claims are amended as follows:**

1. (Amended) A power cable comprising a conductive material core and at least one covering layer, characterized in that said at least one covering layer is constituted essentially of a material comprising an inorganic compound [of sheet]having an exfoliated layered structure and an organic compound inserted between [the] layers of said inorganic compound.

8. (Twice amended) A power cable according to claim 1, wherein the at least one covering layer comprises an insulative material layer constituted essentially of a material comprising an inorganic compound [of sheet]having an exfoliated layered structure and an organic compound inserted between the layers of said inorganic compound.

9. (Twice amended) A power cable according to claim 1, wherein the at least one covering layer comprises an external covering layer constituted essentially of a material comprising an inorganic compound [of sheet]having an exfoliated layered structure and an organic compound inserted between the layers of said inorganic compound.

10. (Twice amended) A medium-voltage to high-voltage direct current power cable according to claim 1, wherein the at least one covering layer comprises at least one semiconductor screen, characterized in that the at least one semiconductor screen is constituted essentially of a material comprising an inorganic compound [of sheet]having an exfoliated layered structure and an organic compound inserted between the layers of said inorganic compound.

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**IN THE ABSTRACT OF DISCLOSURE:**

**The abstract is changed as follows:**

The invention relates to a power cable [comprising]having a conductive material core and at least one covering layer, characterized in that [said]the covering layer is constituted essentially of a material comprising an inorganic compound of sheet structure and an organic compound inserted between the layers of [said]the inorganic compound.